

**PRICE DRAIN AT LOOP 202
FCD GAGE ID# 4573**

STATION DESCRIPTION

LOCATION – The gage site is within the Loop 101 / Loop 202 interchange. Access is via the westbound Loop 202. The gaging equipment is located on an open channel. Latitude N33° 26' 3.4"; Longitude W111° 53' 25.4". Located in the NW1/4 S18 T1N R5W, in the Tempe 7.5-minute USGS quadrangle.

ESTABLISHMENT – The gage was installed on February 12, 2001.

DRAINAGE AREA – Undetermined

GAGE – The gage is a pressure transducer type instrument. The orifice is at elevation 0.26 feet gage height, levels of February 15, 2001.

There is no staff gage at this location.

There is no crest gage at this location.

ZERO GAGE HEIGHT – Gage height 0.00 is defined as the center of the channel at the orifice cross section.

HISTORY – No previous history at this location. Gaging established on February 12, 2001. Gas-purge bubbler system replaced with pressure transducer on June 26, 2006. PT housing replaced in April 2011 due to rot and deterioration of the previous one. No flow for about 5 months from December 2010 through May 2011.

REFERENCE MARKS –

RP1 – is a chiseled X on the top right side of the upstream outlet headwall. Elevation 19.08 feet gage height, levels of February 15, 2001.

CHANNEL AND CONTROL – The channel is lined with a rough type concrete. The sidewalls are soil cement. Channel shape is trapezoidal with a 10-foot bottom width and an 82-foot top width. The channel is the control for all stages.

RATING – The current rating is Rating #2. It was developed using the Manning relation with a slope of 0.00035 ft/ft, and an N value of 0.0158 computed from a discharge measurement from February 23, 2005. Discharges were computed at various levels to 16.0 feet gage height. Rating #2 is valid beginning in Water Year 2005.

Rating #1 was developed using the Manning relation with a slope of 0.00035 ft/ft, and an N value of 0.018. Discharges were computed at various levels to 16.0 feet gauge height.

DISCHARGE MEASUREMENTS – For low discharges, below about 2.0 feet gage height, wading could be done. Higher flow measurements may not be possible due to steep side slopes and limited access to the channel.

POINT OF ZERO FLOW – The PZF is at about 0.00 feet gage height.

FLOODS – A discharge of 993 cfs at 8.50 feet gage height occurred on March 4, 2004. A discharge of 311 cfs at 5.01 feet gage height occurred on February 11, 2005. There have been a number of runoff events with discharge less than 250 cfs.

REGULATION – Undetermined

DIVERSIONS – Undetermined

ACCURACY – Good

JUSTIFICATION – Monitor water quantity from the Price Drain per FCD Project Management request.

UPDATE – July 20, 2011
DE Gardner